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10/737,267

12/15/2003

Michael Berthon-Jones

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EXAMINER

MATTER, KRISTEN CLARETTE

ART UNIT

PAPER NUMBER

3771

MAIL DATE

\* DELIVERY MODE

05/07/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

10/737,267

Applicant(s)

BERTHON-JONES, MICHAEL

Examiner

Kristen C. Matter

Art Unit

3771

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 06 April 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 39-48 and 50-54 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 39-48 is/are allowed.
- 6) ☒ Claim(s) 50-54 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☒ Certified copies of the priority documents have been received in Application No. 08335118.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 50-52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miles (US 5,353,788).

Regarding claim 50, Miles discloses a cardio-respiratory CPAP control system with a pressure transducer for generating an airflow signal representative of respiratory airflow from the patient and a processor (12) for analyzing the signals generated by the transducers (see column 5, lines 1-35). Miles also discloses that the system has ECG leads, which are capable of providing information needed to determine the presence of cardiogenic airflow. Miles does not specifically disclose that the processor has instructions for determining airway patency by detection of cardiogenic airflow. However, the apparatus taught by Miles is structurally the same as the claimed invention and is capable of being programmed with instructions for determining airway patency by an analysis to detect cardiogenic airflow. Please note that the current claim language (i.e., for determining, for generating) is considered intended use and therefore not given patentable weight. The device disclosed by Miles need only have the structural limitations and be fully capable of performing the intended use.

Regarding claims 51 and 52, the system disclosed by Miles has a means to increase, decrease, or keep unchanged a desired pressure supplied to the patient based on the presence of

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cardiogenic airflow without the installation of additional software (see column 3, line 63-column 4, line 15).

Claims 53 and 54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miles as applied to claim 50 above and further in view of Gruenke et al. (US 5,259,373).

Regarding claim 53, Miles does not teach a Fourier transform to analyze the measured airflow. Gruenke et al. discloses the use of a Fourier transform to analyze signals from a CPAP device (see Figure 21). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used a Fourier transform as taught by Gruenke et al. to analyze the airflow signals because Fourier transforms are well known in the art for evaluating frequency components of signals. Furthermore, applicant acknowledges in the disclosure that use of the Fourier transform is not critical, and that any mathematical method of detecting rhythmic oscillation with a frequency of the anticipated heart rate and its first harmonic will suffice.

Regarding claim 54, the apparatus taught by Miles determines patient's cardiac rate and the processor can calculate a component of airflow from this input (see column 4, lines 55-65).

#### ***Allowable Subject Matter***

Claims 39-48 are allowed over the prior art of record.

#### ***Response to Arguments***

Note that there were no arguments listed with respect to claims 50-52, which were rejected for the same reasons as claim 45. Therefore, Examiner assumes the Applicant intended

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so include arguments for claims 50-52 with claim 45 arguments. Applicant's arguments filed 4/6/2007 have been fully considered but they are not persuasive. With regards to claims 50, as stated before, the current claim language does not positively require detecting the presence of cardiogenic airflow to determine airway patency, only that an apparatus be capable of doing so. The combination disclosed by Miles of a programmable processor that analyzes ECG and pressure sensor signals would provide a means capable of determining if the airway was patent by an analysis of an airflow signal to detect the presence of cardiogenic airflow. With regards to claims 53 and 54, Examiner is unsure what Applicant means by the obviousness of using a Fourier Transform being "academic." Is Applicant acknowledging that it is well known as stated by the Examiner? Regardless, this argument is not persuasive because Gruenke et.al. clearly show the use of a Fourier Transform for analyzing air flow signals.

### *Conclusion*

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The Kallok et al. references (US 5,174,287 and US 5,146,918) are cited to show other similar apnea detection methods.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

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will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kristen C. Matter whose telephone number is (571) 272-5270. The examiner can normally be reached on Monday - Friday 9-4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Justine Yu can be reached on (571) 272-4835. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

*KCMatter*

Kristen C. Matter  
Examiner  
Art Unit 3771

*Justine Yu*

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4/30/07